

RESPONSE TO OFFICE ACTION
New Atty. Docket No. P0810
(Old Atty. Docket No.: 067470.0161)

Serial No.:10/612,810
Filed: July 1, 2003

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Amendments

IN THE CLAIMS:

Please cancel claims 30-33.

1. (Original) An apparatus comprising a receiving unit having a receiving portion which can removably receive a cartridge, said receiving unit having a movably supported head with spaced read and write portions, said receiving unit being responsive to insertion into said receiving portion of a cartridge having an information storage medium for moving said head adjacent and relative to the storage medium while using said head to write selected information to the storage medium and to then read back said selected information in order to determine compensation information relating to said spacing between said read and write portions, said receiving unit subsequently effecting writing of information with said head as a function of said compensation information.

2. (Original) An apparatus according to Claim 1, including a cartridge which can be removably inserted into said receiving portion of said receiving unit, and which includes a rotatable information storage medium.

3. (Original) An apparatus according to Claim 1, wherein said receiving unit effects said subsequent writing of information in a manner which includes converting a desired position for said write portion into a corresponding position for said read portion that compensates for said spacing between said read and write portions, and then positioning said read portion at said corresponding position while writing the information to said storage medium with said write portion.

4. (Original) An apparatus according to Claim 1, wherein said receiving unit effects said subsequent writing of information by using a predetermined translation to determine a nominal position for said head, and by then using said compensation information to adjust said nominal position in order to determine an actual position for said head.

5. (Original) An apparatus according to Claim 4, wherein said predetermined translation includes use of a predetermined polynomial.

6. (Original) An apparatus according to Claim 4, wherein said compensation information includes a scaling value, said receiving unit multiplying said nominal position by said scaling value.

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7. (Original) An apparatus according to Claim 4, wherein said compensation information includes a scaling value and an offset value, said receiving unit multiplying said nominal position by said scaling value and then adding said offset value to the result of the multiplication.

8. (Original) An apparatus according to Claim 4, wherein said compensation information includes an offset value, said receiving unit adding said offset value to a value which is a function of said nominal position.

9. (Original) An apparatus according to Claim 1,
wherein said selected information includes first and second portions which are respectively written to and read from respective spaced locations on a storage medium in a cartridge; and
wherein said receiving unit determines said compensation information as a function of said first and second portions as read back with said head.

10. (Original) An apparatus according to Claim 9,
wherein said compensation information includes a scaling value and an offset value; and
wherein said receiving unit effects said subsequent writing of information by using a predetermined translation to determine a nominal position for said head, by multiplying said nominal position by said scaling value, and by then adding said offset value to the result of the multiplication.

11. (Original) An apparatus according to Claim 1, wherein said reading back of said selected information includes:
searching for a location of said selected information by effecting successive reads with said head in respective different search positions;
fitting a curve to a characteristic of said selected information as read in three of said search positions; and
treating one of a minimum and maximum of said curve as corresponding to the position of a center of said selected information.

12. (Original) An apparatus according to Claim 11, wherein said characteristic of said selected information for the centermost of said three search positions is one of greater than and less than said characteristic of said selected information for each of the outermost of said three search positions.

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13. (Original) An apparatus according to Claim 11, wherein said receiving unit carries out said successive reads in successive first and second stages, the spacing between adjacent search positions of said head being larger in said first stage than in said second stage.

14. (Original) An apparatus according to Claim 13, wherein said receiving unit carries out said first stage of said search until the occurrence of a read in which said characteristic of said selected information satisfies a specified criteria, and according to a search pattern in which said receiving unit effects a read with said head in a first of said selected positions and then effects successive said reads by alternately positioning said head on opposite sides of said first position with a progressively increasing distance from said first position.

15. (Original) An apparatus according to Claim 13, wherein said receiving unit carries out said second stage of said search by effecting successive said reads while moving said head in a selected direction to successive said search positions, until the occurrence of a read in which the direction of change in said characteristic of said selected information between successive said reads undergoes a reversal, the most recent three search positions then being used as said three search positions on which said curve fitting is based.

16. (Original) A method of operating a receiving unit having a cartridge receiving portion and having a head with spaced read and write portions, said method including:

responding to insertion into said receiving portion of a cartridge having an information storage medium by moving said head adjacent and relative to the storage medium while using said head to write selected information to the storage medium and to then read back said selected information;

using the selected information as read back with said head to determine compensation information relating to said spacing between said read and write portions; and

subsequently effecting writing of information with said head as a function of said compensation information.

17. (Original) A method according to Claim 16, including effecting said subsequent writing of information in a manner which includes converting a desired position for said write portion into a corresponding position for said read portion that compensates for said spacing between said read and write portions, and then positioning said read portion at said corresponding position while writing information to said storage medium with said write portion.

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18. (Original) A method according to Claim 16, including effecting said subsequent writing of information by using a predetermined translation to determine a nominal position for said head, and by then using said compensation information to adjust said nominal position in order to determine an actual position for said head.

19. (Original) A method according to Claim 18, wherein said using of said predetermined translation includes using a predetermined polynomial.

20. (Original) A method according to Claim 18, including configuring said compensation information to include a scaling value, said using of said compensation information to adjust said nominal position including multiplying said nominal position by said scaling value.

21. (Original) A method according to Claim 18, including configuring said compensation information to include a scaling value and an offset value, said using of said compensation information to adjust said nominal position including multiplying said nominal position by said scaling value and then adding said offset value to the result of the multiplication.

22. (Original) A method according to Claim 18, including configuring said compensation information to include an offset value, said using of said compensation information to adjust said nominal position including adding said offset value to a value which is a function of said nominal position.

23. (Original) A method according to Claim 16,
including configuring said selected information to include first and second portions which are respectively written to and read from respective spaced locations on a storage medium of a cartridge; and
wherein said receiving unit determines said compensation information as a function of said first and second portions as read back with said head.

24. (Original) A method according to Claim 23,
including configuring said compensation information to include a scaling value and an offset value;
and
effecting said subsequent writing of information by using a predetermined translation to determine a nominal position for said head, by multiplying said nominal position by said scaling value, and by then adding said offset value to the result of the multiplication.

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25. (Original) A method according to Claim 16, wherein said reading back of said selected information includes:
searching for a location of said selected information by effecting successive reads with said head in respective different search positions;
fitting a curve to a characteristic of said selected information as read in three of said search positions; and
treating one of a minimum and maximum of said curve as corresponding to the position of a center of said selected information.

26. (Original) A method according to Claim 25, including selecting said three search positions so that said characteristic of said selected information for the centermost of said three search positions is one of greater than and less than said characteristic of said selected information for each of the outermost of said three search positions.

27. (Original) A method according to Claim 25, including carrying out said successive reads in successive first and second stages, the spacing between adjacent search positions of said head being larger in said first stage than in said second stage.

28. (Original) A method according to Claim 27, including carrying out said first stage of said search until the occurrence of a read in which said characteristic of said selected information satisfies a specified criteria, and according to a search pattern which includes effecting a read with said head in a first of said selected positions and then effecting successive said reads by alternately positioning said head on opposite sides of said first position with a progressively increasing distance from said first position.

29. (Original) A method according to Claim 27, including carrying out said second stage of said search by effecting successive said reads while moving said head in a selected direction to successive said search positions, until the occurrence of a read in which the direction of change in said characteristic of said selected information between successive said reads undergoes a reversal, the most recent three search positions then being used as said three search positions on which said curve fitting is based.

30. (Canceled)

31. (Canceled)

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32. (Cancelled)

33. (Cancelled)

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